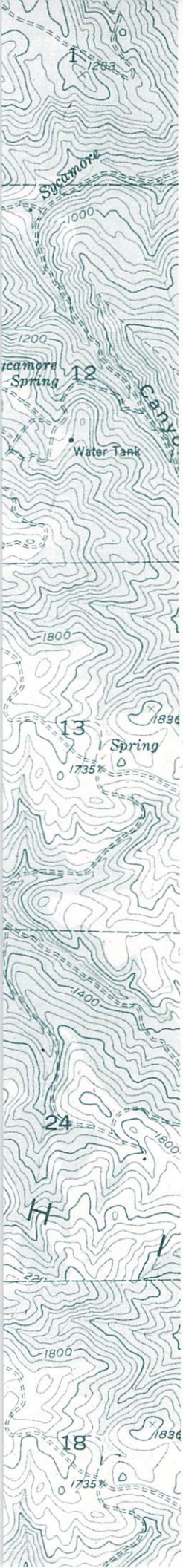

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BECADO PLACE and VISTA DEL MAR

THIRD YEAR (2011) MONITORING REPORT

Project No.:
927 CIF

Zentner and Zentner

Oakland

Prepared for:
City of Fremont

DFG Permit No.:
2008-0525-3

Date Issued:
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Land Planning and Restoration

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I. EXECUTIVE SUMMARY

A. Introduction

The preparation of the Becado Place monitoring report is one of the conditions of an agreement between the City of Fremont and the California Department of Fish and Game (CDFG). Among other elements of preservation and protection, a restoration planting plan (Zentner and Zentner 2008) was prepared to provide habitat enhancement and protection features to mitigate for the removal of trees within the riparian habitat of Sabercat Creek.

B. Project Description

In January 2008, elm (*Ulmus americana*) trees were removed from the riparian zone along Sabercat Creek, a tributary to Coyote Creek, adjacent to Becado Place in the City of Fremont (*Figure 1*). The CDFG required that the City revegetate the work area with native trees and shrubs, including the removal of additional non-native invasive species and planting of native understory species (groundcovers such as sedges and grasses). Following the restoration plan, many of the remaining sapling elms were removed and the site was replanted in January 2009 (*Figure 2*). Additionally, several trees were removed from a strip along the Creek downstream along Vista Del Mar. These were replaced with 18 willow cuttings in the Creek. This work was done under a separate agreement with CDFG, but is referenced here.

C. Mitigation Monitoring Program and Results

According to the restoration planting plan, project success will be monitored for a total of 10 years, although monitoring reports will only be completed for years 1 through 5, 7 and 10. Actual maintenance work, such as irrigation, would be confined to years 1 through 3, aside from normal weed clearance or related activities, to allow the plant material to become self-sufficient. The project will require a monthly walk-through by an ecological monitor (EM) for the first year, quarterly reviews in years two through five, and annual reviews in years 6 through 10 to check on the project's progress. The annual monitoring reports submitted to the City and CDFG document the progress of the mitigation areas toward the performance standards.

II. INTRODUCTION

A. Location

The Becado Place restoration area is located in the City of Fremont within the Mission San Jose area of Alameda County. The site is just under a mile southwest of Hwy 680 and approximately 3 miles northeast of Hwy 880. The restoration area can be found within Section 1, Range 1 West, Township 5 South on the Niles 7.5 minute USGS topographic map *(Figure 1)*. The site can be reached by traveling south on Mission Blvd off of Hwy 660 south or north on Mission Blvd. off of Hwy 680 north or from Hwy 880. From Mission Blvd., turn west on Washington Blvd., south on Bryant Street and then west onto Becado Place to just near the end of the cul-de-sac to reach the site, which is on the south side of the street.

B. Site Description

The restoration area is an approximately 1-acre riparian zone adjacent to Sabercat Creek. It was dominated by non-native plants and the large fallen trunks of the elms (the smaller branches were chipped to provide weed-suppressant groundcover). Non-native species included often-invasive plants; these dominated the site while native species were infrequent. The elm trees that were removed are a moderately invasive species and have spread a number of small saplings, many of which have died, presumably of Dutch elm disease.

Native species in this area are infrequent but include the following: blue wildrye (*Elymus glaucus*), elderberry (*Sambucus mexicana*), California brome (*Bromus carinatus*), coast live oak (*Quercus agrifolia*) and arroyo willow (*Salix lasiolepis*). Becado Place neighbors concerned about restoration of native habitats may have planted several of these species.

C. Goals and Objectives

The primary goal of this monitoring project is to document the progress of the mitigation area towards meeting the project objectives, which consist of the following:

1. Remove as much of the dead or dying elm trees and non-native vegetation as possible.

2. Replant with a mix of native trees, shrubs, and grasses to replace non-native vegetation and restore the riparian zone.

3. Monitoring to assure native habitats as required by the performance standards detailed below in Table 1.

Table 1
Annual Performance Standards

Monitored Element	1st Year Performance Standard	5th Year Performance Standard	10th Year (Final) Performance Standard
Survival	80%	60%	50%
Plant Vigor	Good vigor by 90% of the survivors	Good vigor by 90% of the survivors	Good vigor by 90% of the survivors

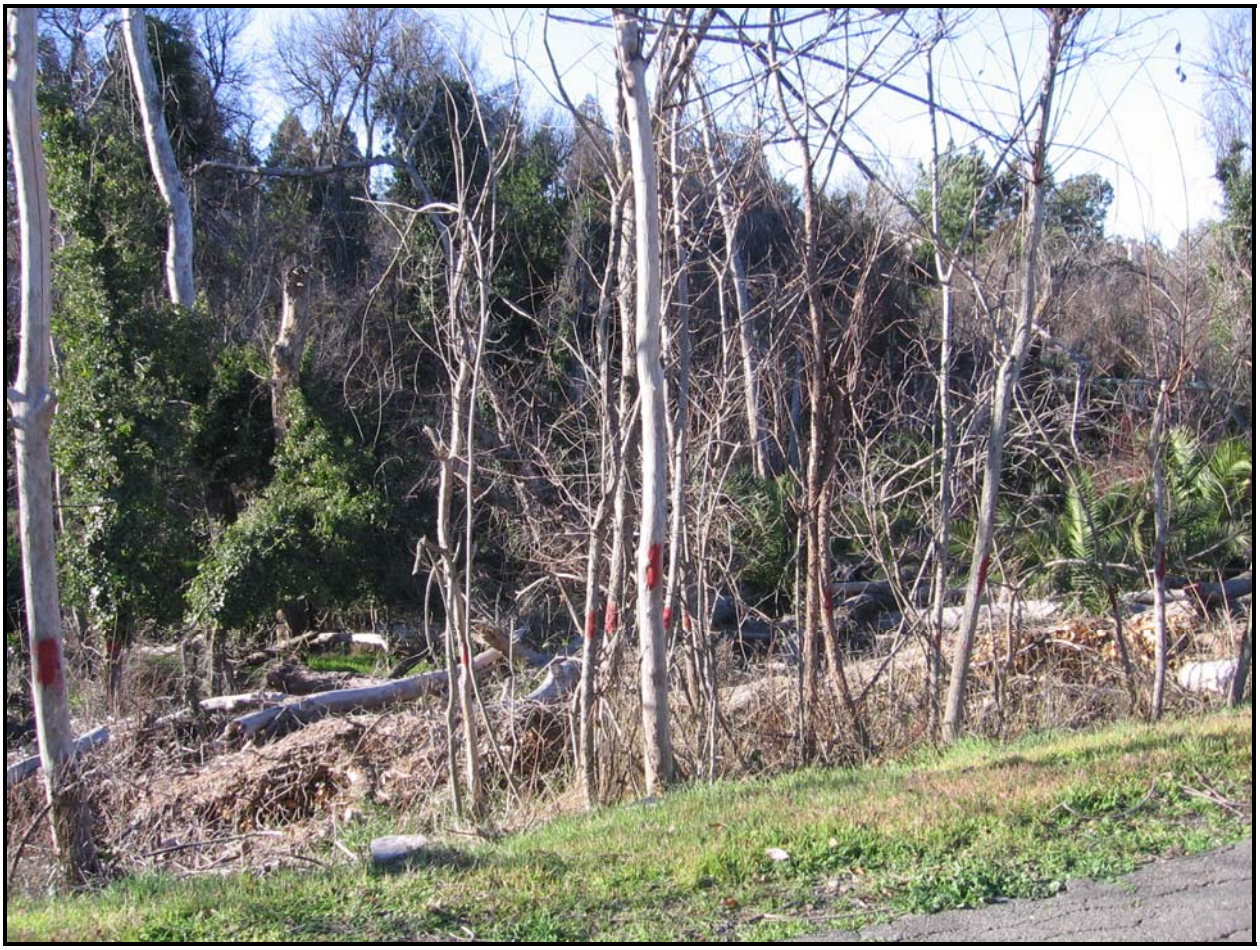

Photo 1: *View of the site facing south towards Sabercat Creek from Becado Place before restoration work. The trees marked in red were removed prior to restoration. August 2008.*

III. THIRD YEAR MONITORING RESULTS

A. Methods

The planted woodland species are monitored for survival, vigor and height. Table 2 below details the three height classes that are used and the respective height range of each. During woodland monitoring reviews, the health or vigor of each plant is also assessed and a tally of the number of each surviving species is completed.

Table 2
WOODLAND MONITORING HEIGHT CATEGORIES

Height Class	Trees	Shrubs
1	Less than 120"	18" or less
2	121" – 239"	19" - 36"
3	240" or greater	Greater than 36"

B. Results

Results from the woodland survey at Becado Place are summarized in Table 3 and detailed in Appendix A.

Table 3
Becado Place Woodland Vegetation Results

Monitored Element	Performance Standard (5th year)	1st Year Results	2nd Year Results	3rd Year Results
Survival	60% (102 of 170)	37% 63 plants	33% 56 plants	34.7% 59 plants
Plant Vigor	Good vigor by 90% of the survivors	96.8%	100%	100%

The woodland performed satisfactorily in the third year of monitoring. The woodland vegetation had apparently stabilized in the second year of monitoring and was relatively unchanged this past

year. The number of surviving plants increased to 59, up from 56 last year for a total of 34.7% survival. Almost all of this vegetation is made up of wild rose (*Rosa californica*) and valley oak (*Quercus lobata*), the latter of which were planted adjacent to the street after the main restoration plantings were completed. The increase in survival is mainly due to the spread of wild rose in the mitigation area. Wild rose continues to be the only shrub that has been successful. As noted in earlier reports, the primary cause for the overall mortality of the other woodland plantings is the lack of water complicated by high weed competition. The City irrigated the restoration area by hand the first year, but the extent of the downed logs made irrigation very difficult.

In addition to the roses, however, red fescue (*Festuca rubra*) is growing well along the eastern end of the project site and a number of creeping wildrye (*Leymus triticoides*) patches continue to spread from the original planting sites. Though these don't count in the woodland numbers, they are keeping weeds down in the areas that they dominate.

Photo 2: *View of a typical wild rose (Rosa californica) shrub within the planting area that has begun to spread. June 2011*

While the total survival remains moderate, the success of the wild rose is encouraging. These plants continue to thrive even with the high weed competition and no irrigation. If the site is not re-worked (see below), irrigation should be provided to the woodland vegetation, additional wild rose and creeping wildrye should be planted to boost overall numbers to their required levels and cover and keep down invasive weeds. Similar vegetation such as golden current (*Ribes aureum*), mugwort (*Artemesia douglasiana*), thimbleberry (*Rubus parviflorus*), and grey willow (*Salix exigua*) could also be attempted in order to boost the diversity of the woodland plantings.

Photo 3: View of a patch of vigorous creeping wildrye (*Leymus triticoides*), a native grass that has spread within the planting area. Note the presence of weeds outside of the wildrye area. *June 2011*

As noted last year, all or a large portion of the project site will to be used as a staging areas for the Sabercat Creek Public Access and Riparian Habitat Improvements Project. Replanting the mitigation area is a part of the Sabercat Creek Improvement Project. These plantings will meet the requirements of the existing CDFG Streambed Alteration Permits for both the original Becado Place project (Notification No. 1600-2008-0525-3) and the Sabercat Creek Improvement

Project (Notification No. 1600-2009-0387-R3).

C. Vista Del Mar Results

Results from the woodland survey are summarized in Table 4 and detailed in Appendix A.

Table 4
Vista Del Mar Woodland Vegetation Results

Monitored Element	Performance Standard (first year)	1st Year Results	2nd Year Results	3rd Year Results
Survival	NA	18	15	10
Plant Vigor	NA	100%	100%	100%

The willow cuttings at Vista Del Mar performed satisfactorily in the third year of monitoring, though the overall trend is downward. A total of 18 willow cuttings were originally installed downstream of the Becado Place project. This year found that 10 of the cuttings survived and appeared healthy. Six of the willows reached a height class of 2 this year and two remained at a height class of 3. The loss of five of the willows could be from the dense cover of other vegetation shading or otherwise out-competing the smaller, younger trees. It is probably more likely that some of willows were broken off during larger Creek flows this winter and could not be seen through the other vegetation. If they did break off, the trees should be old enough to resprout and should be observable next year.

Because the total number of trees is now almost half of that planted, more willow cuttings should be planted this fall.

3. Photodocumentation

Photographs were taken from established photopoints shown in *Figure 2* to document changes in habitat development over successive monitoring periods. Representative photographs are supplied throughout the text.

V. REPORT DISTRIBUTION LIST

The Becado Place monitoring report is distributed to the following:

Gloria Reta
City of Fremont
42551 Osgood Road
Fremont, CA 94539

The City of Fremont will also post copies of the Monitoring Report on their website
http://www.fremont.gov/

Marcia Grefsrud
California Dept. of Fish and Game
7329 Silverado Trail
Napa, CA 94588

Appendix A

Woodland Monitoring Results

Becado Place
2011 Woodland Monitoring

		Species	Class 1 Healthy	Class 1 Unhealthy	Class 2 Healthy	Class 2 Unhealthy	Class 3 Healthy	Class 3 Unhealthy	TOTAL	Expected (Originally Planted)
Trees	coast live oak	*Quercus agrifolia*	2		1				**3**	30
	valley oak	*Quercus lobata*	1				20		**21**	2 (+20)*****
	arroyo willow	*Salix lasiolepis*			2				**2**	15
	Fremont cottonwood	*Populus fremontii*							**0**	10
	California buckeye	*Aesculus californica*							**0**	8
	western sycamore	*Plantanus racemosa*							**0**	5
	box elder	*Acer negundo*							**0**	7
Shrubs	elderberry	*Sambucus mexicana*							**0**	5
	wild rose	*Rosa californica*	19		9		5		**33**	64
	coffeeberry	*Rhamnus californica*							**0**	12
	toyon	*Heteromeles arbutifolia*							**0**	12
		TOTAL	**22**	**0**	**12**	**0**	**25**	**0**	**59**	**170**

***** *Note: 20 class 3 valley oaks were planted adjacent to the street after the planting project was completed. The Sabercat Creek restoration project will not impact these oak trees.*

Height Categories:	
Trees	**Shrubs**
Class 1 = <24"	Class 1 = < 18"
Class 2 = 24 - 60"	Class 2 = 18 - 36"
Class 3 = 60 - 84"	Class 3 = > 36"

TOTAL LIVE	**59**
Total Healthy	59
Total Class 3	**25**
% Healthy	**100.00%**
% Healthy Trees	100.00%
% healthy Shrubs	100.00%
% Survival	**34.71%**

Vista Del Mar
2011 Woodland (Willow) Monitoring

Species	Class 1 Healthy	Class 1 Unhealthy	Class 2 Healthy	Class 2 Unhealthy	Class 3 Healthy	Class 3 Unhealthy	TOTAL
Salix lasiolepis	2		6		2		**10**

Appendix B

Wildlife Observed

Amphibians

Pacific treefrog – *Pseudacris* [*Hyla] regilla* (heard)

Reptiles

Western fence lizard – *Sceloporus occidentalis*

Birds

Cooper's hawk – *Accipiter cooperii*

scrub jay – *Aphelocoma californica*

red-tailed hawk – *Buteo jamaicensis*

turkey vulture – *Cathartes aura*

American crow – *Corvus brachyrhynchos*

northern mockingbird – *Mimus polyglottos*

American robin – *Turdus migratorius*

mourning dove – *Zenaida macroura*

Mammals

feral cat – *Felis catus*